

ABSTRACT

The present invention provides an inexpensive separator satisfactory in shutdown properties and meltdown properties and having excellent insulating properties. A porous film having a thickness of 5 to 100 µm, characterized by including a porous layer of a polyamide-imide resin which has a glass transition temperature of 70°C or higher and an inherent viscosity of 0.5 dl/g or higher and containing a unit represented by the following structural formula (I), the amount of the unit being 20 mol% or more based on all repeating structural units. Also provided is the porous film which is characterized in that the porous polyamide-imide resin layer has an amide bond/imide bond ratio of from 10/90 to 45/55. Further more provided is a lithium-ion secondary cell which contains a positive electrode and a negative electrode which are capable of occluding/ releasing lithium ions and either of the porous films disposed as a separator between the electrodes.

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